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## Positive Youth Development Programs Targeting Students with Greater Psychosocial Needs: A Replication

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After completion of the Tier 2 Program (Secondary One Level) of the P.A.T.H.S. Project, 9,931 participants in 212 schools responded to the Subjective Outcome Evaluation Form (Form C) to assess their views of the program, instructors and perceived effectiveness of the program. Four major types of program were identified, including programs based on adventure-based counseling approach (N=57), programs concentrated on volunteer training and services (N=29), programs offering both adventure-based counseling and volunteer training and services activities (N=96), and other programs with different foci (N=30). Results showed that high proportions of the respondents had positive perceptions of the programs and the instructors, with over four-fifths of the respondents regarding the program as helpful to them. Participants' perceptions of the program, instructors and benefits of the program were significantly inter-related. Participants' views about the program and instructors were found to be significant predictors of program effectiveness.

**KEYWORDS:** subjective outcome evaluation; positive youth development; adventure-based counseling approach; volunteer training and services

## INTRODUCTION

The Project "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme" ("P.A.T.H.S." denotes *Positive Adolescent Training through Holistic Social Programmes*) is a large-scale positive youth development program designed for junior secondary school students (Secondary 1 to Secondary 3 which is equivalent to Grade 7 to Grade 9 in the North American system) in Hong Kong [1]. It consists of two tiers of program. The Tier 1 Program targets all students joining the program in a particular form (i.e., universal prevention initiative). It is a structured curriculum designed by the Research Team, in which participating students learn competencies with reference to the 15 positive youth development constructs [2,3]. The Tier 2 Program is specially designed for students with greater psychosocial needs in different psychosocial domains (i.e., selective prevention) by the school social work service providers. It is noteworthy that the term "at-risk" is deliberately avoided because the term is very stigmatizing in the Chinese culture and it deters parents and students from joining the related programs [4].

There are several characteristics of the Tier 2 Program in the project. First, the Tier 2

Program targets adolescents with greater psychosocial needs who are identified in the Tier 1 Program and/or via other sources, such as objective assessment tools (e.g., Family Assessment Instrument, Life Satisfaction Scale, Hong Kong Student Information Form), teachers' ratings, student records and other relevant quantitative and qualitative information based on systematic assessment. Second, there is minimum requirement on the number of participants to be served in the Tier 2 Program. For those schools providing full Tier 1 Program (i.e., 40 curriculum units in a 20-hour program), they were expected to serve at least one-fifth of the students at each form. On the other hand, for schools providing core Tier 1 Program (i.e., 20 curriculum units in a 10-hour program), they would have to serve at least two-fifths of the students at each form. Third, based on the developmental needs of the students and/or their parents in a particular school, the Tier 2 Program is designed to address the participants' development in the academic, personal (e.g., adjustment, mental health and value concerns), interpersonal and family domains, with reference to the positive youth development constructs, goals and objectives covered in this project. Several non-mutually exclusive examples for the Tier 2 Program include: (a) mentorship programs involving the alumni of the schools; (b) mental health promotion programs; (c) adventure-based counselling; (d) parenting programs; (e) service learning programs; and (f) resilience enhancement programs.

In the literature on positive youth development programs conducted in the Western contexts, many programs have been designed to help adolescents with greater psychosocial needs and the related evaluation findings have been documented [5,6,7]. In Hong Kong, while it is very common for social work agencies to design programs for adolescents with greater psychosocial needs (e.g., adventure-based counseling, voluntary training program), systematic evaluation and documentation of program evaluation is rarely found in the local social work literature.

In Project P.A.T.H.S., three previous studies had been conducted to evaluate the Tier 2 Program implemented in three cohorts: 3,173 Secondary 1 students in 52 schools in the Experimental Implementation Phase [8]; 2) 1,898 Secondary 2 students in 49 schools in the Experimental Implementation Phase [9]; and 3) 10,255 Secondary 1 students in 207 schools in the Full Implementation Phase [10]. These studies generally showed that roughly four-fifths of the respondents regarded the program to be helpful to them. Moreover, these studies also demonstrated significant correlations among perceptions of the program, program implementers and program effectiveness [9,10]. These findings are consistent with the previous studies that program effectiveness was associated with program content and teachers' skills and qualities [11,12,13]. Furthermore, some significant differences were found between different program implementation approaches. For instance, participants of the volunteer training and services related programs were likely to have better views about the instructors and better global views about the program [9], and participants attending programs comprising both adventure-based counselling approach and volunteer training and services element were likely to report higher levels of program effectiveness and better global views about the program [10].

As different cohorts of students were involved in the Project P.A.T.H.S., it would be important to ask whether the existing evaluation findings could be replicated. This paper presents and discusses the findings of a subjective outcome evaluation of the Tier 2 Program (Secondary One Level) implemented in the second year of the Full Implementation Phase (FIP: 2007-08 school year). This study attempted to examine different domains of subjective outcome evaluation (e.g., perceptions of the program, program implementers, and perceived program effectiveness) in different programs with different foci, relationships among different domains of subjective outcome evaluation, and the predictive relationships of view about program and view about implementers to program effectiveness.

## **METHODS**

### **Participants**

A total of 213 schools joined the Secondary 1 Program of the Project P.A.T.H.S. in the second year of the Full Implementation Phase (2007-08 school year). In these schools, there were 15,494 participants involved in the Tier 2 Program, of which 13,032 students were identified by teachers, parents and/or via self-administered questionnaires as having greater psychosocial needs and they were invited to join the Tier 2 Program. The other 2,462 participants were parents and teachers of those identified students. The mean number of participants joining the Tier 2 Program per school was 72.74 (ranging from 13 to 360 participants). The average number of sessions provided per school (normally one and half hours to three hours per session) was 22.71 (ranging from 8 to 120 sessions).

The participants were invited to respond to the Subjective Outcome Evaluation Form (Form C), which was developed by the Research Team [14], usually immediately after completion of the Tier 2 Program. Nevertheless, one school refused to submit Form C because the school atmosphere was poor after an accident happened during the Tier 2 Program implementation. As a result, only a total of 9,931 forms (mean=46.84 forms per school, ranged from 7 to 198) were received from 212 schools (total number of participants was 15,414). The overall response rate was 64.43%. There are three plausible reasons for the low response rate: 1) some participants withdrew from the Tier 2 Program before completion; 2) some participants were absent in the last session and did not complete the evaluation form; 3) some schools did not invite the adult participants to respond to the evaluation form.

### **Instruments**

The Subjective Outcome Evaluation Form (Form C) was designed by Shek and Siu [14] with an aim to measure the perceptions of the Tier 2 Program. There are seven parts in this evaluation form:

- Participants' perceptions of the program, such as program design, quality of service, appropriateness of the program, and interaction among the participants (8 items)
- Participants' perceptions of the workers, such as the preparation of the workers, professional attitude and knowledge, and interaction with the participants (8 items)
- Participants' perceptions of the effectiveness of the program, such as promotion of different psychosocial competencies, resilience and overall personal development (8 items)
- Things that the participants appreciated most (open-ended question)
- Opinion about the workers (open-ended question)
- Things that the participants learnt from the program (open-ended question)
- Areas that require improvement (open-ended question)

### **Procedures**

On the day of data collection, the purpose of the evaluation was explained and the principle of confidentiality was repeatedly emphasized to the participants. The participants were asked to indicate their wish if they did not want to respond to the evaluation questionnaire (i.e., "passive" informed consent was obtained). All participants responded to all scales in the evaluation form in a self-administration format. Adequate time was provided for the participants to complete the questionnaire. To facilitate the program evaluation, the Research Team developed an evaluation manual with standardized instructions for collecting the subjective outcome evaluation data [14]. In addition, adequate training was provided to the

social workers during the 20-hour training workshops on how to collect and analyze the data collected using the Form C.

After collecting the data, the social work service providers were requested to input the data in an EXCEL file developed by the Research Team which would automatically compute the frequencies and percentages associated with the different ratings for an item. When the providers submitted the reports, they were also requested to submit the soft copy of the consolidated data sheets. The data from all service providers were then aggregated to “re-construct” the overall profile by the Research Team. Since some amendments were made during the program implementation (e.g., program cancellation due to insufficient participants), the delivered program content was reported again in the program report.

As the Tier 2 Programs were designed according to the various needs and the contextual situations of different schools, it is hard to compare their results directly. Therefore, an analysis on the program contents was conducted in identifying the major program elements of the Tier 2 Programs for all participating schools. Three research assistants (one with a Bachelor Degree in Social Sciences, one with a Bachelor Degree in Psychology, and one with a Master Degree and several years of frontline social work experiences) categorized the program contents delivered by the social workers as indicated in the program reports submitted to the Research Team. The criteria were strictly set to categorize a program according to the program proposal or revised proposal together with the actual activities.

## RESULTS

Reliability analysis with the schools as the unit of analyses showed that the Form C was internally consistent: 8 items related to the program ( $\alpha=.99$ , mean inter-item correlation  $=.90$ ), 8 items related to the workers ( $\alpha=.99$ , mean inter-item correlation  $=.92$ ), 8 items related to the program effectiveness ( $\alpha=.99$ , mean inter-item correlation  $=.91$ ), and 24 items based on the whole Form C ( $\alpha=.99$ , mean inter-item correlation  $=.86$ ).

Results of the content analyses showed that three major types of program elements were identified, namely, the adventure-based counseling approach, volunteer training and services, and others. First, a program will be classified as containing the adventure-based counseling (ABC) elements if and only if the espoused theory was matched with the theory-in-action [15]. Second, examples related to volunteer training and services were programs related to planning and organizing activities, role play and drama. The most popular volunteer services in this study were visiting and providing services for elderly, children, mental challenging people and disadvantaged groups. Third, the programs without elements of ABC or volunteer training and services were classified as “others”. Examples of this category included groups promoting learning skills, learning motivation, emotional competence, self-expression skills, self-efficacy, self-understanding, self-confidence and resilience, social skills training program, therapeutic group with narrative therapy approach and cognitive behavior therapy. An analysis of the programs delivered by the social workers showed that volunteer training and services and adventure-based counseling activities were the two types of program approaches frequently adopted in the Tier 2 Programs. A total of 85.85% of all Tier 2 Programs delivered by the 212 secondary schools contained at least one of these two elements.

The characteristics of the Tier 2 Programs of the 212 secondary schools are presented in Table 1. The Tier 2 Program can be categorized into four types by the main types of program elements used or program approaches adopted. They are: 1) adventure-based counseling (ABC) approach together with volunteer training and services (Type A, 45.28%); 2) ABC only (Type B, 26.89%); 3) volunteer training and services only (Type C, 13.68%); and 4) other approaches (Type D, 14.15%). The mean overall effectiveness of all the Tier 2 Programs in the 212 secondary schools ranged from 4.23 to 4.74 on a six-point scale towards the positive side. Since the Project P.A.T.H.S. made use of 15 constructs identified by Catalano and his

colleagues [3], the average number of constructs indicated in the reports for these programs ranged from 5.33 to 9.25 and the mode was 8 (Table 1).

Based on the participants' answers to the closed-ended questions (quantitative data), there are several observations. First, over 80% of the respondents perceived the Tier 2 Program that they participated in a positive manner (Table 2). For example, 86.42% of the participants indicated that they had much interaction with other participants; 87.87% of the participants indicated that they were satisfied with the service. Comparing the four types of programs, Type C Program received the lowest ratings in all the eight indicators for program satisfaction (Kruskal-Wallis Test,  $p < 0.05$ ). Second, a very high proportion of the participants had positive evaluation of the social workers (Table 3). For example, 90.36% of the respondents indicated that the workers were well prepared for the program; 89.32% of the respondents indicated that the workers had good attitudes; 90.42% of the participants revealed that they were satisfied with the workers. Comparing the four types of programs, Type C Program received the lowest ratings in all the eight indicators for program workers (Kruskal-Wallis Test,  $p < 0.01$ ). Third, as shown in Table 4, over four-fifths of the respondents perceived that the program had induced positive changes in them. For example, the participants perceived the services had enhanced their growth (85.45%), and let them learn how to help themselves (87.14%) and how to solve their problems (86.61%). Comparison of the four types of programs showed that participants in Type A Program perceived the program to be more effective than the other three types of programs. All ratings on the eight items were the highest among all categories (Kruskal-Wallis Test,  $p < 0.05$ ).

Regarding the inter-relationships among the subjective outcome evaluation measures, Table 5 shows that various domains of the subjective outcome evaluation were inter-related - the overall perceptions about the program and the overall views about the instructors were significantly correlated with each other, and both of them were positively correlated with all eight aspects of perceived effectiveness of the program. Several sets of multiple regression analyses were conducted to examine the predictive effects of the views about program and the views about instructors on program effectiveness. As shown in Table 6, the variable, views about program was found to be a significant predictor of the program effectiveness of all programs, except that of Type C Program, whereas the views about instructors was acted as a significant predictor of Type B Program only.

## DISCUSSION

Several observations can be highlighted in this study. First, similar to previous study [8,9,10], adventure-based counseling approach and volunteer training and services covered 85.9% of all delivered programs and were found to be the two dominant approaches. Obviously, in Hong Kong, these two approaches are commonly adopted because of their theoretical base grounds in the experiential learning theory [16,17]. For instance, adventure-based counseling approach was formally adopted as the major program theory for a huge social intervention program entitled "The Understanding the Adolescent Project" (UAP) to combat the problems among students identified as adolescent-at-risk from 2001 to 2004 in Hong Kong [4,18]. Also, volunteer training and services approach has a much longer history which can date back to late 1960's and has since been a popular program.

The second observation is that only 30 schools (14%) did not use the two dominant program elements in their Tier 2 Program. Among these schools which adopted non-popular program theories, respondents in three schools (10%) that involved students, parents and teachers in their Tier 2 Program gave the highest rating of 4.74 on the overall effectiveness, and reported having very high average program attendance (Table 1). Further qualitative studies are necessary to illuminate the reasons of higher program effectiveness and examine the correlation between program elements and program effectiveness.

Third, overall speaking, 87.87% of participants were satisfied with the services received (see Table 2). This overall rating compared favorably with the findings from three previous studies on the EIP 2005-06 for S1 students (86.82%) [8], EIP 2006-07 for S2 students (87.65%) [9], and FIP 2006-07 for S1 students (85.34%) [10]. Although the ratings of Type C Program were found to be the lowest, the last indicator “on the whole, participants were satisfied with the service” was rated positively by 84.71% of 1,224 participants. It revealed that Type C Program in different schools were well-received. In addition, there are several plausible reasons for the comparatively low ratings: 1) the use of program involved volunteer training and services only; 2) no teachers were involved in Type C Program; 3) the average program attendance was quite low, e.g., 77.18% (involving students and parents) (see Table 1).

Fourth, over 85% of participants rated positively on the eight indicators for Tier 2 Program workers, ranging from 85.47% on “the worker(s) had much interaction with participants” to 90.42% on “on the whole, participants were satisfied with the worker(s)” (see Table 3). Although the ratings of Type C Program were found to be the lowest, all the ratings were positively over 83%, ranging from 83.17% on “the worker(s) had much interaction with participants” to 87.71% on “on the whole, participants were satisfied with the worker(s)”. It revealed that the social workers in different schools provided quality services.

Fifth, over 80% of participants rated positively on the eight indicators for program effectiveness, i.e., ranging from 80.55% to 87.14% (see Table 4), showing that the participants were generally satisfied with the results. Since the participants were generally satisfied with the program delivery and the workers, it is not surprising to see that the perceived program effectiveness was high. Particularly, respondents in program adopting both adventure-based counseling approach and voluntary training and services approach had the highest rating on program effectiveness. It further demonstrates that programs adopting these two approaches simultaneously are more likely to be well-received [10]. Nevertheless, it is noteworthy that all the programs were well-received might be due to the fact that the Tier 2 Programs were designed by the social services agency rendering school social work services to cater the students’ unique psychosocial needs. When the participants’ needs were being taken care of, they would have better evaluation of the program. Therefore, it suggests that these kinds of programs should be carried out and evaluated continuously, provided that they can suit the needs of the potential participants.

Sixth, consistent with previous findings [9,10], the three main domains of the subjective outcome evaluation, i.e., perception of the program, perception of program implementers and perceived program effectiveness were significantly correlated. Furthermore, the present study found that the view about the program was a strong and significant predictor of program effectiveness in most of the Tier 2 Programs, while view about instructors was a significant predictor of adventure-based counseling programs only. These findings not only demonstrated that program effectiveness was determined by program content, quality of services, and instructors’ knowledge, attitudes and skills [11,12,13], but also shed insights on successful factors in program development and implementation leading to program success.

In short, the significance of this study was to document the effectiveness of the positive youth development programs targeting students with greater psychosocial needs, in the aspects of program, implementers and program benefits. It is noteworthy that adventure-based counseling programs can help to instill novel experiences in young people who are usually not good at verbal expression (i.e., walk therapy rather than talk therapy) and its usefulness has been endorsed by counselors [19,20,21], however, its long-term effect is still questionable. Similarly, the positive evaluation findings based on the service learning programs are basically consistent with the literature that engagement in voluntary service is conducive to the positive development of adolescents [22,23]. However, as students in Hong Kong may treat voluntary work as a vehicle for enriching their resumes, there is a need to understand

their motives for joining voluntary service and the long-term effects of engaging in voluntary work in Hong Kong.

It is noteworthy that there are several limitations of the present study. First, as only Secondary 1 (i.e., Grade 7) students were involved, further studies are needed to examine each program type with each grade in order to illuminate issues of program effectiveness and whether or not adult participants rated differently in comparison with Secondary 1 participants. Second, only 64.43% of the program participants responded to Form C and some of the adult participants might not complete the evaluation form. Obviously, efforts should be made to understand the factors contributing to this observation. Third, as the present findings were “re-constructed” from the evaluation reports submitted by the agencies serving the participating schools, the unit of analyses was school instead of individual. As such, the power of the statistical analyses would become low and individual variations were lost in the process. Finally, the limitations of subjective outcome evaluation utilizing quantitative findings should be realized [24,25] and addition of qualitative findings would be helpful [26,27]. Furthermore, if resources permit, studies attempting to examine the convergence of objective outcome evaluation findings and subjective outcome evaluation findings [28] and evaluation based on the program implementers [29] should be carried out. Despite these limitations, the present study provides support for the effectiveness of the Tier 2 Program of the Project P.A.T.H.S. in Hong Kong for the Full Implementation Phase.

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**TABLE 1**  
**Summary Table of Program Characteristics**

Main Program Approach	Clientele	Average No. of Participants	Average Program Attendance (%)	Average No. of Program Aims Indicated in the Reports	Average No. of Constructs Indicated in the Reports	Mean of Overall Effectiveness
Adventure Based Counseling approach & Volunteer training and services (Type A) (N=96)	a (N=74)	53.11	82.70	2.09	6.91	4.58
	b (N=15)	69.13	85.93	2.27	7.13	4.56
	c (N=4)	139	86.38	1.75	9.25	4.27
	d (N=3)	98	89.67	1.67	6.00	4.24
Adventure Based Counseling approach only (Type B) (N=57)	a (N=47)	50.94	81.10	2.09	6.13	4.55
	b (N=6)	63.33	81.23	2.50	7.00	4.62
	c (N=1)	196.00	91.50	3.00	8.00	4.57
	d (N=3)	74.67	86.67	2.00	7.67	4.45
Volunteer training and services only (Type C) (N=29)	a (N=21)	56.33	83.43	2.38	5.62	4.55
	b (N=8)	76.12	77.18	2.25	9.00	4.47
Other approaches (Type D) (N=30)	a (N=21)	38.67	81.72	1.95	5.76	4.64
	b (N=6)	100.67	83.62	3.17	6.17	4.23
	d (N=3)	140.33	92.77	2.33	5.33	4.74

a=Only students involved

b=Students & parents involved

c=Students & teachers involved

d=Students, parents & teachers involved

**TABLE 2**  
**Comparison of the Positive Views About Tier 2 Program**  
**Among Different Program Approaches**

	Participants with positive responses in different program approaches									
	ABC approach & Volunteer training and services <sup>1</sup>		ABC approach <sup>2</sup>		Volunteer training and services <sup>3</sup>		Others <sup>4</sup>		Overall	
	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%
1. The activities were carefully planned.	4003 (4675)	85.63	2287 (2659)	86.01	1186 (1438)	82.48	977 (1103)	88.58	8453 (9875)	85.60
2. The quality of the service was high.	3963 (4666)	84.93	2278 (2656)	85.77	1173 (1443)	81.29	956 (1104)	86.59	8370 (9869)	84.81
3. The service provided could meet the participants' needs.	4029 (4671)	86.26	2263 (2650)	85.40	1204 (1442)	83.50	966 (1102)	87.66	8462 (9865)	85.78
4. The service delivered could achieve the planned objectives.	4023 (4662)	86.29	2308 (2658)	86.83	1205 (1442)	83.56	966 (1103)	87.58	8502 (9865)	86.18
5. Participants could get the service they wanted.	3893 (4660)	83.54	2212 (2654)	83.35	1187 (1442)	82.32	938 (1104)	84.96	8230 (9860)	83.47
6. Participants had much interaction with other participants.	4043 (4659)	86.78	2291 (2647)	86.55	1211 (1449)	83.57	974 (1103)	88.30	8519 (9858)	86.42
7. Participants would recommend others who have similar needs to participate in the program.	3772 (4655)	81.03	2175 (2645)	82.23	1143 (1447)	78.99	901 (1100)	81.91	7991 (9847)	81.15
8. On the whole, participants were satisfied with the service.	4098 (4663)	87.88	2347 (2648)	88.63	1212 (1439)	84.23	998 (1100)	90.73	8655 (9850)	87.87

**Note:**

- 1:** The program contents related to both adventure-based counseling approach and volunteer training and services were indicated in the Tier 2 program reports.
- 2:** The program contents related to adventure-based counseling approach were indicated in the Tier 2 program reports.
- 3:** The program contents related to volunteer training and services were indicated in the Tier 2 program reports.
- 4:** Except adventure-based counseling approach and volunteer training and services, other program contents were indicated in the Tier 2 program reports.

**TABLE 3**  
**Comparison of the Positive Views About Tier 2 Program Workers**  
**Among Different Program Approaches**

	Participants with positive responses in different program approaches									
	ABC approach & Volunteer training and services <sup>1</sup>		ABC approach <sup>2</sup>		Volunteer training and services <sup>3</sup>		Others <sup>4</sup>		Overall	
	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%
1. The worker(s) had professional knowledge.	4185 (4663)	89.75	2364 (2660)	88.87	1233 (1440)	85.63	1015 (1104)	91.94	8797 (9867)	89.16
2. The worker(s) demonstrated good working skills.	4121 (4664)	88.36	2359 (2656)	88.82	1223 (1440)	84.93	989 (1105)	89.50	8692 (9865)	88.11
3. The worker(s) were well prepared for the program.	4228 (4654)	90.85	2400 (2652)	90.50	1251 (1438)	87.00	1016 (1100)	92.36	8895 (9844)	90.36
4. The worker(s) understood the needs of the participants.	4088 (4658)	87.76	2335 (2646)	88.25	1229 (1438)	85.47	986 (1102)	89.47	8638 (9844)	87.75
5. The worker(s) cared about the participants.	4181 (4656)	89.80	2359 (2654)	88.88	1249 (1435)	87.04	1000 (1102)	90.74	8789 (9847)	89.26
6. The worker(s)' attitudes were very good.	4185 (4658)	89.85	2365 (2647)	89.35	1241 (1436)	86.42	998 (1099)	90.81	8789 (9840)	89.32
7. The worker(s) had much interaction with participants.	3996 (4655)	85.84	2258 (2653)	85.11	1196 (1438)	83.17	969 (1104)	87.77	8419 (9850)	85.47
8. On the whole, participants were satisfied with the worker(s).	4238 (4659)	90.96	2388 (2652)	90.05	1263 (1440)	87.71	1022 (1104)	92.57	8911 (9855)	90.42

**Note:**

- 1:** The program contents related to both adventure-based counseling approach and volunteer training and services were indicated in the Tier 2 program reports.
- 2:** The program contents related to adventure-based counseling approach were indicated in the Tier 2 program reports.
- 3:** The program contents related to volunteer training and services were indicated in the Tier 2 program reports.
- 4:** Except adventure-based counseling approach and volunteer training and services, other program contents were indicated in the Tier 2 program reports.

**TABLE 4**  
**Comparison of the Positive Views About Tier 2 Program Effectiveness**  
**Among Different Program Approaches**

	Participants with positive responses in different program approaches									
	ABC approach & Volunteer training and services <sup>1</sup>		ABC approach <sup>2</sup>		Volunteer training and services <sup>3</sup>		Others <sup>4</sup>		Overall	
	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%
1. The service has helped participants a lot.	3895 (4625)	84.22	2233 (2632)	84.84	1162 (1432)	81.15	910 (1091)	83.41	8200 (9780)	83.84
2. The service has enhanced participants' growth.	3978 (4626)	85.99	2273 (2632)	86.36	1173 (1428)	82.14	930 (1090)	85.32	8354 (9776)	85.45
3. In the future, participants would receive similar service(s) if needed.	3854 (4607)	83.66	2170 (2622)	82.76	1162 (1430)	81.26	895 (1090)	82.11	8081 (9749)	82.89
4. Participants have learnt how to help themselves through participating in the program.	4051 (4618)	87.72	2297 (2618)	87.74	1203 (1429)	84.18	948 (1088)	87.13	8499 (9753)	87.14
5. Participants have had positive change(s) after joining the program.	3986 (4602)	86.61	2264 (2619)	86.45	1194 (1426)	83.73	934 (1085)	86.08	8378 (9732)	86.09
6. Participants have learnt how to solve their problems through participating in the program.	3999 (4591)	87.11	2289 (2616)	87.50	1179 (1416)	83.26	936 (1079)	86.75	8403 (9702)	86.61
7. Participants' behavior has become better after joining this program.	3828 (4610)	83.04	2149 (2625)	81.87	1129 (1430)	78.95	880 (1086)	81.03	7986 (9751)	81.90
8. Those who knew the participants agree that this program has induced positive changes in them.	3737 (4611)	81.05	2128 (2626)	81.04	1117 (1430)	78.11	868 (1079)	80.44	7850 (9746)	80.55

**Note:**

- 1:** The program contents related to both adventure-based counseling approach and volunteer training and services were indicated in the Tier 2 program reports.
- 2:** The program contents related to adventure-based counseling approach were indicated in the Tier 2 program reports.
- 3:** The program contents related to volunteer training and services were indicated in the Tier 2 program reports.
- 4:** Except adventure-based counseling approach and volunteer training and services, other program contents were indicated in the Tier 2 program reports.

**TABLE 5**  
**Inter-correlations Among Different Domains of Subjective Outcome Evaluation**

Variables / Items	Views about program	Views about instructors
<b>Views about program</b>	1	0.93**
<b>Views about instructors</b>	0.93**	1
<b>Perceived effectiveness of the program:</b>		
1. The service has helped participants a lot.	0.91**	0.88**
2. The service has enhanced participants' growth.	0.89**	0.86**
3. In the future, participants would receive similar service(s) if needed.	0.91**	0.83**
4. Participants have learnt how to help themselves through participating in the program.	0.91**	0.87**
5. Participants have had positive change(s) after joining the program.	0.91**	0.87**
6. Participants have learnt how to solve their problems through participating in the program.	0.89**	0.86**
7. Participants' behaviour has become better after joining this program.	0.86**	0.82**
8. Those who knew the participants agree that this program has induced positive changes in them.	0.83**	0.78**

**Note:** A Bonferroni adjustment to the alpha level (17 pairs of correlations) was used.

\*\* $p < 0.003$

**TABLE 6**  
**Predictors of Program Effectiveness**

<b>Type A Program</b>	
<b>ABC approach &amp; Volunteer training and services</b>	
<b>Significant Predictors</b>	<b><math>\beta</math></b>
(i) Views about program	0.75**
(ii) Views about instructors	0.21 <sup>n.s.</sup>
	$R^2 = 0.91$
	$F (2,95) = 444.26^{**}$
<b>Type B Program</b>	
<b>ABC approach</b>	
<b>Significant Predictors</b>	<b><math>\beta</math></b>
(i) Views about program	0.66**
(ii) Views about instructors	0.28*
	$R^2 = 0.85$
	$F (2,56) = 147.98^{**}$
<b>Type C Program</b>	
<b>Volunteer training and services</b>	
<b>Significant Predictors</b>	<b><math>\beta</math></b>
(i) Views about program	0.52 <sup>n.s.</sup>
(ii) Views about instructors	0.38 <sup>n.s.</sup>
	$R^2 = 0.79$
	$F (2,28) = 48.33^{**}$
<b>Type D Program</b>	
<b>Others</b>	
<b>Significant Predictors</b>	<b><math>\beta</math></b>
(i) Views about program	1.09**
(ii) Views about instructors	-0.18 <sup>n.s.</sup>
	$R^2 = 0.87$
	$F (2,29) = 86.60^{**}$
<b>Overall</b>	
<b>Significant Predictors</b>	<b><math>\beta</math></b>
(i) Views about program	0.81**
(ii) Views about instructors	0.13 <sup>n.s.</sup>
	$R^2 = 0.86$
	$F (2,211) = 632.67^{**}$

Note. \*\* $p < 0.01$ , \* $p < 0.05$